



CHAOS AMPLIFIERS **Service Manual**

MODEL: CH1000

SPECIFICATIONS

Maximum power output (2 Ohms): 500W x 4ch

RMS power Output: 200W x 4ch

Bridged Power Output: 1000W x 2ch

Frequency response: 9 - 50KHz

Harmonic distortion: 0.01%

S/N Ratio: 130dB

Power Source Voltage: 14.4V

Ground: Negative

Power consumption: 25A(with 125Wx2 rated output)

External dimensions: 300(W)x65(H)x586(D)mm

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them. The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

2. Place the parts and wiring back in their original positions after replacement or re-wiring. For proper circuit construction, use of insulation tubes, bonding, gaps to PCB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection. If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

3. Check for safety after repair. Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots. If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

4. Caution in removal and making wiring connection to the parts for the automobile. Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

5. Cautions regarding chips.

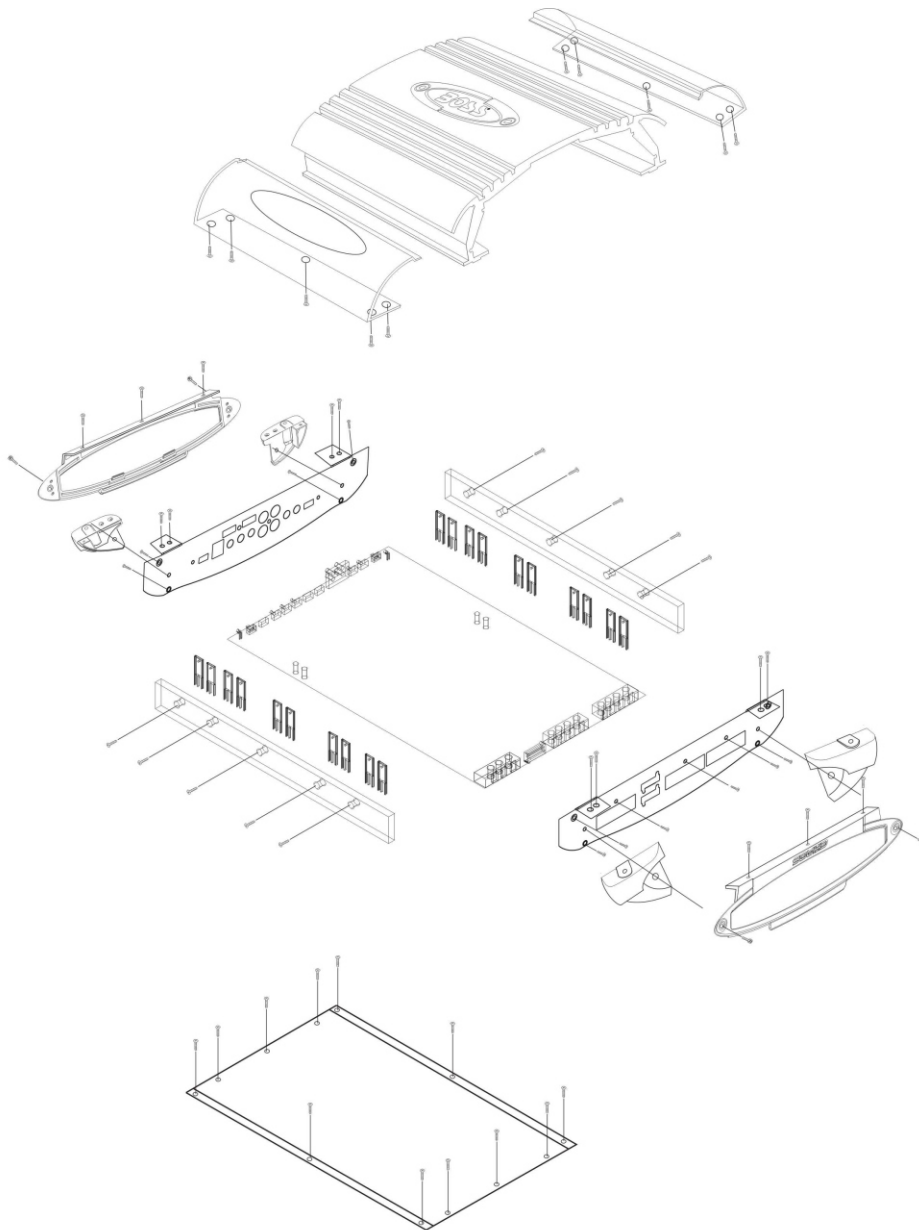
Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.

6. Cautions in handling flexible PCB

Before working with a soldering iron, make sure that the iron tip temperature is around 270... Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.

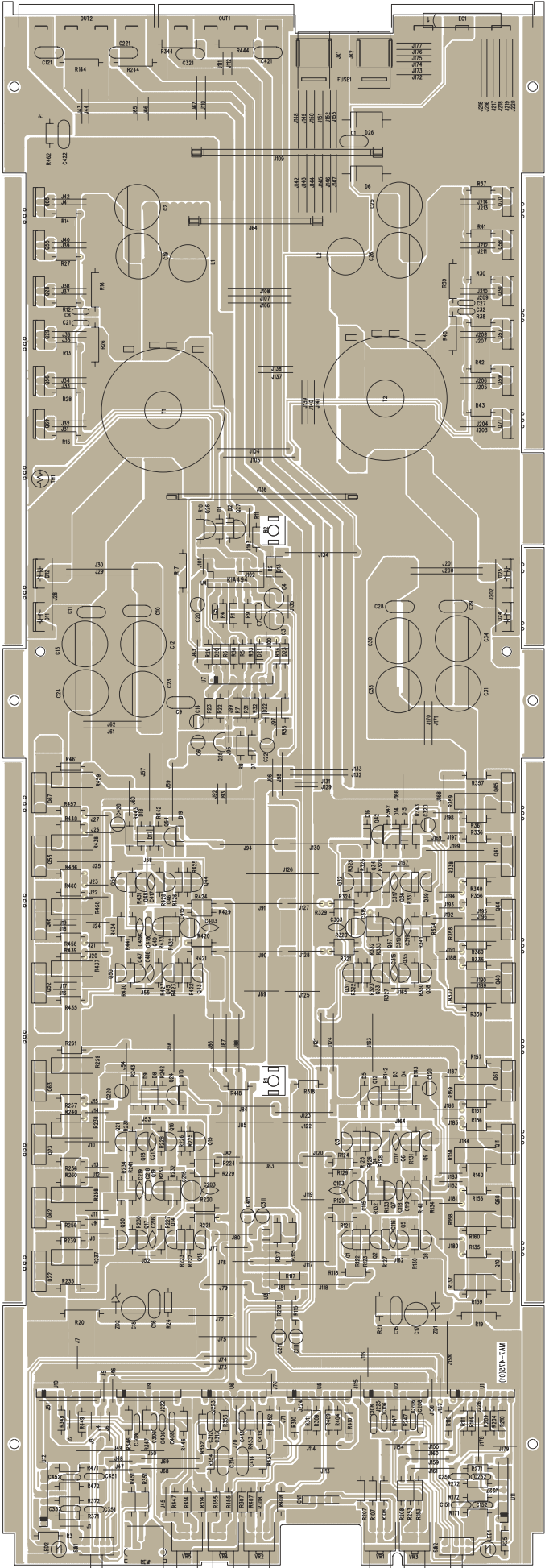
7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

EXPLODED VEIW

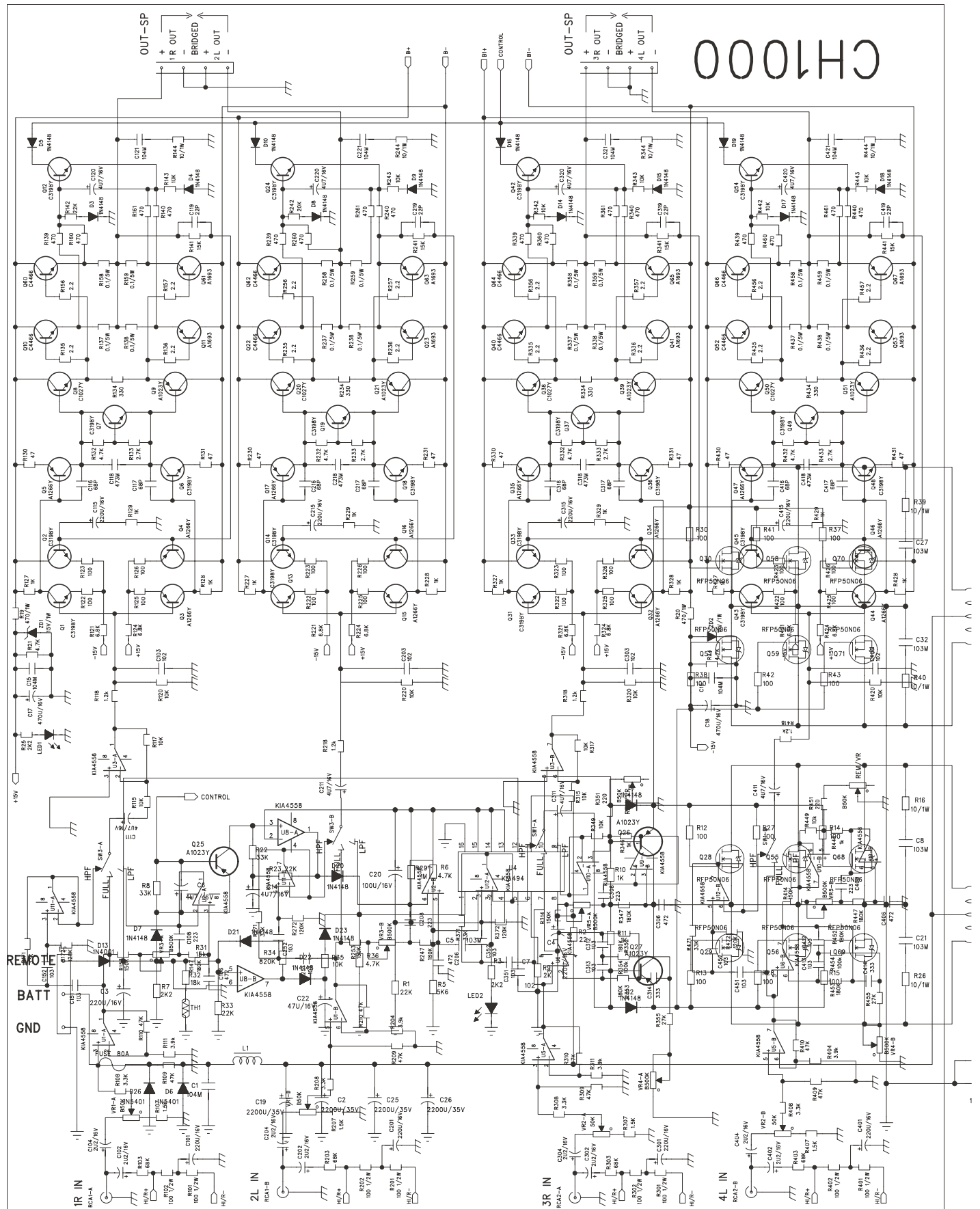


EXPLODED VIEW PART LIST		
ITEM	Description	Mfr's Part No.
1	Heat sink	MH-MA7A235-6SXXX
2	Left Chrome Cover	MC-M7A235L-2CXXX
3	Right Chrome Cover	MC-M7A235R-2CXXX
4	Front Panel	MC-M7A2CHF-20XXX
5	Rear Panel	MC-M7A2CHR-20XXX
6	Left Mounting foot	PB-MA7AXXL-C0LEG
7	Right Mounting foot	PB-MA7AXXR-C0LEG
8	Front End Cap	PB-MA7AXX0-CCBRK
9	Rear End Cap	PB-MA7AXX0-CCBRK
10	Bottom Chassis	MB-MA7A235-2SXXX

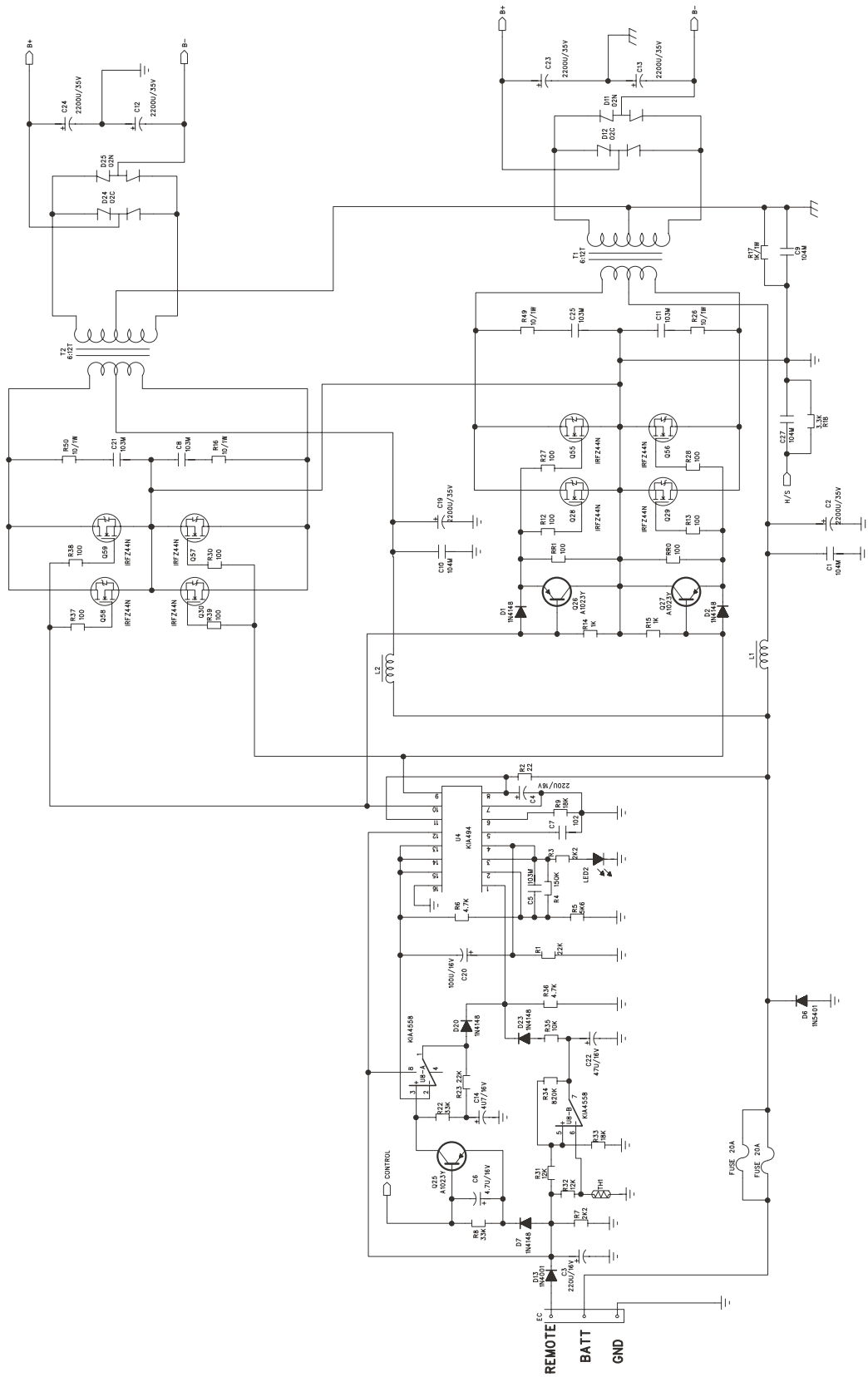
PRINTED CIRCUIT BOARD



CIRCUIT DIAGRAM 1



CIRCUIT DIAGRAM 1



PARTS LIST - 1

Part Number	desc	Location	qty
CR-40091X0-VOS00	4PINS RCA	RCA1	1
CT-SOCKET0-3MA7A	PWER TERMINELS		1
CT-SOCKET0-4MA7A	SPEAKER TERMINALS		2
EC-C4220X0-D5050	CAP 22PF(D)	C119,219,319,419	4
EC-C4680X0-J5050	CAP 68PF(J)	C116~7,216~7,316~7,416~7	8
EC-E2107X0-M50A1	CAP 100UF/16	C20	1
EC-E2227X0-M63A1	CAP 220UF/16	C3,4,101,115,201,215,301,315,401,415	10
EC-E2476X0-M50A1	CAP 47UF/16V	C22	1
EC-E2477X0-MA0A3	CAP 470UF/16	C17,18	2
EC-E4225X0-M50A1	CAP 2.2UF/50	C102,104,202,204,302,304,402,404	8
EC-E4475X0-M50A1	CAP 4.7UF/50	C6,14,111,120,211,220,311,320,411,420	10
EC-E6228X0-MA3B5	CAP 2200/35V	C2,12,13,19,23~6,30,31,33,34	12
EC-M5102X0-J5590	C-CAP 0.001	C7,103,203,303,403	5
EC-M5103X0-J5590	C-CAP 0.01	C5,8,21,27,32,151,251,252,312,313,351,352,412,413,451,452,	17
EC-M5104X0-JA0A3	C-CAP 0.1	C1,9~11,15,16,28,29,121,221,321,421,422	13
EC-M5223X0-J66A3	C-CAP 0.022	C108,208,308,408	4
EC-M5333X0-J82A1	C-CAP 0.033	C314,414	2
EC-M5472X0-J5090	C-CAP 0.0047	C106,206,306,406,	4
EC-M5473X0-J80A1	C-CAP 0.047	C118,218,318,418	4
ED-R2502C0-H0000	DIODE ESAC25-02C	D12,25	2
ED-R2502N0-H0000	DIODE ESAC25-02N	D11,24	2
ED-R4001X0-H0000	DIODE IN-4001	D13	1
ED-R5401X0-H0000	DIODE IN-5401	D6,26	2
ED-S4148X0-H0000	DIODE IN-4148	D1~D5,7~10,14~23	19
ED-Z15VXX0-H4744	ZENER IN4744	ZD1,2	2
EE-C23X5X0-10302	LED RED 3MM	LED2	1
EE-C53X5X0-10302	LED GREEN 3MM	LED1	1
EO-IMA7475-VXXX6	TRANSFORMER	T1,2	2
EO-VMA924X-V8025	CHOKE COIL MA9-24	L1 , L2	2
ER-CS001X0-VE0I0	SLR0.1 5W J	R(1,2,3,4)37,(1,2,3,4)38,(1,2,3,4)58,(1,2,3,4)59	16
ER-HG153X0-HXXXX	THERMISTOR 150K	TH1	1
ER-OG022X0-H2526	RES 2.2 1/4W	R135,136,156,157,235,236,256,257,335,336,356,357,435,436,456,457	16
ER-OG100X0-HA04C	RES 10 1W	R16,26,39,40,144,244,344,444	8
ER-OG101X0-H2526	RES 100 1/4W	R12,13~15,27,28,30,37,38,41,42,43,122,123,125,126,222,223, 225,226,322,333,325,000,000,000,000,000	28

PARTS LIST - 2

ER-OG101X0-H5039	RES 100 1/2W	R101,102,201,202,301,302,401,402	8
ER-OG102X0-H2526	RES 1K 1/4W	R10,11,127~129,227~9,327~329,427~9,346,446	16
ER-OG102X0-HA04C	RES 1K 1W	R17	1
ER-OG103X0-H2526	RES 10K 1/4W	R(1,2,3,4)20,(1,2,3,4)42,(1,2,3,4)43,35,115,117,315,317,349,449	19
ER-OG104X0-H2526	RES 100K 1/4W	R354,454	2
ER-OG105X0-H2526	RES 1M 1/4W	R29	1
ER-OG122X0-H2526	RES 1.2K 1/4W	R118,218,318,418	4
ER-OG124X0-H2526	RES 120K 1/4W	R172,272,372,472	4
ER-OG152X0-H2526	RES 1.5K 1/4W	R107,207,307,407	4
ER-OG153X0-H2526	RES 15K 1/4W	R31,141,241,341,441	5
ER-OG154X0-H2526	RES 150K 1/4W	R4,153,253,314,414	5
ER-OG183X0-H2526	RES 18K 1/4W	R32,33	2
ER-OG184X0-H2526	RES 180K 1/4W	R(1,2,3,4)47,353,353,452,453	8
ER-OG220X0-H2526	RES 22 1/4W	R2	1
ER-OG221X0-H2526	RES 220 1/4W	R351,451	2
ER-OG221X0-HB05F	RES 220 2W	R19,20	2
ER-OG222X0-H2526	RES 2.2K 1/4W	R3,7,25	3
ER-OG223X0-H2526	RES 22K 1/4W	R1,9,23	3
ER-OG272X0-H2526	RES 2.7K 1/4W	R133,233,333,433	4
ER-OG273X0-H2526	RES 27K 1/4W	R355,455	2
ER-OG331X0-H2526	RES 330 1/4W	R134,234,334,434	4
ER-OG332X0-H2526	RES 3.3K 1/4W	R108,208,308,408,462	5
ER-OG333X0-H2526	RES 33K 1/4W	R8,22,171,271,371,471	6
ER-OG392X0-H2526	RES 3.9K 1/4W	R111,204,311,404	4
ER-OG470X0-H2526	RES 47 1/4W	R130,131,230,231,330,331,430,431	8
ER-OG471X0-H2526	RES 470 1/4W	R(1,2,3,4,)39,(1,2,3,4)40,(1,2,3,4)60(1,2,3,4,)61	16
ER-OG472X0-H2526	RES 4.7K 1/4W	R6,21,24,36,132,232,332,432	8
ER-OG473X0-H2526	RES 47K 1/4W	R109,110,209,210,309,310,409,410	8
ER-OG562X0-H2526	RES 5.6K 1/4W	R5	1
ER-OG682X0-H2526	RES 6.8K 1/4W	R121,124,221,224,321,324,421,424	8
ER-OG683X0-H2526	RES 68K 1/4W	R103,203,303,403	4
ER-OG824X0-H2526	RES 820K 1/4W	R34	1
ES-S23D29X-V0098	SWITCH SK23D39	SW1,2	2
ET-C1023X0-PY000	TR KTA1023-Y	Q9,21,25,26,27,39,51	7
ET-C1027X0-NY000	TR KTC1027-Y	Q8,20,38,50	4
ET-C1266X0-PY000	TR A1266Y	3,4,5,15,16,17,32,34,35,44,46,47	12

PARTS LIST - 3

ET-C3198K0-NY000	TR KTC3198-Y	Q1,2,6,7,12,13,14,18,19,24,31,33,36,37,42,43,45,48,49,54	20
ET-CB688X0-P0000	TR KTB688-O	Q11,23,41,53,61,63,65,67	8
ET-CD718X0-N0000	TR KTD718-O	Q10,22,40,52,60,62,64,66	8
ET-FFZ44X0-X0000	MOSFET TR IRFZ 44N	Q28~30,55~59,68~71	12
EW-BG40XX0-01XCU	Copper connection plate 40MM	J64	3
EW-BG60XX0-01XCU	Copper connection plate 60MM	J109,136	4
EW-CS06XX0-05AA0	Jumper wire 6MM	J2,3,52,53,55,58,95,162,164~167,169,185,187,197	15
EW-CS07XX0-05AA0	Jumper wire 7MM	J71,76,78,81,92,93,101,113	8
EW-CS08XX0-05AA0	Jumper wire 8MM	J1,5,7~9,11~24,27,46,48,50,63,65,66,77,82,100,102,111,112,119,129,131, 135,155~157,179,180~183,189,190~196	51
EW-CS10XX0-05AA0	Jumper wire 10MM	J4,6,26,45,47,70,97,99,103,115,116,120,154,166,168,186,188,192,198	19
EW-CS12XX0-05AA0	Jumper wire 12MM	J31~44,60,89,125,127,128,137,138,172~177,203~214	39
EW-CS13XX0-05AA0	Jumper wire 13MM	J54,80,96,160	4
EW-CS15XX0-05AA0	Jumper wire 15MM	J10,67,110,72~74,79,98,117,118,122,130,139,140,141,159,161,170,171,178	20
EW-CS20XX0-05AA0	Jumper wire 20MM	J25,49,56,57,59,61,62,68,69,75,84~88,90,91,94,114,121,123,124, 132,133,142~153,163,184,199,215~220	45
EW-CS22XX0-05AA0	Jumper wire 22MM	J83,106~108	4
EW-CS25XX0-05AA0	Jumper wire 25MM	J28~30,104,105,126,134,158,200,201,203,	11
II-4558SX0-V0009	IC KA4558S	U1~3,U5~11	10
II-DBL494X-H0016	IC S-494P	U4	1
VR-BN503X0-V0A26	VR 50KB T12	VR1,2	2
VR-BN504X0-V0A26	VR 500KB T12	VR3~5	3